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Editorials.

"BURNING OF THE ANDERSON HOSPITAL. THE HOSPITAL NOW A NECESSITY."

The destruction of the Anderson Hospital by fire April 25th, at once enlisted the sympathy of organized medicine throughout the State. It will be remembered that this hospital was fostered and built largely by the efforts of the Anderson County Medical Society, and formally opened during the meeting of the State Association at Anderson in 1908. The profession in Anderson county has always been noted for progress, but the hospital soon became a great stimulus to professional activity, and in a short time it was necessary to nearly double the capacity of the building. We are glad to hear that the hospital will be rebuilt at once.

Looking over the records in this State for the past year, we find a surprising number of hospitals either planned or actually constructed. Not long ago only one or two cities in the State owned such institutions. Today there are dozens of them. In the great and beneficent work of organized medicine the hospital should continue to be a large factor.

There can be no more potent influence in these practical days to develop the County Medical Society than around the hospital. Such an institution arranged for research, with its laboratories, library, society rooms and more important than all these, the patients would go far towards elevating the standards of the profession everywhere, and the sick public would be much better served.

Dr. G. A. Neuffer, councilor of the third district, and now chairman of council, brought this matter very forcibly to the attention of the House of Delegates in his report April 16th, as follows:

Laurens has a city hospital and the members of the society give it their undivided support.

Greenwood also has a splendid hospital, which is being well patronized by the public, who are fast beginning to appreciate the advantage of hospital care of the sick, in medical as well as surgical cases.

I made the suggestion that there should be a well equipped hospital in every county in the State; the physicians would find the practice of medicine much more

agreeable and satisfactory, and I believe many lives would be saved, while the sick would be made more comfortable.

THE SIMS MONUMENT.

At a recent meeting of the South Carolina Medical Association the question of erecting a monument to Marion Sims came up for a large share of discussion. The plan which will be clearly set before the members of the association shortly, in brief, will be the systematic collection of money, and subscriptions in every county in the State.

The Legislature gave us $5,000, and now we should earnestly devote ourselves to securing the additional $5,000 necessary.

The following extracts are from the well written article by Dr. John A. Wyeth, in the Cyclopedia of American Medical Biography, by Howard Kelley, just published, and reviewed in another part of THE JOURNAL.

Sims, James Marion (1813-1883).

James Marion Sims was on his father's side English, on his mother's of Scotch-Irish descent. His paternal grandfather, John Sims, was born December 27, 1790, and married Mahala Mackey in 1812. Of the father, his distinguished son left a record that "he was one of the best of men and best of husbands." He was sheriff of Lancaster county, South Carolina, from 1830-1834. His mother was the daughter of Lydia Mackey, wife of Charles Mackey, a revolutionary soldier. who, having been taken within the British lines, was tried by court martial and sentenced to death as a spy by Colonel Tarleton, and she successfully interceded with this British officer for the commutation of the death sentence, and ultimately obtained her husband's liberty.

Marion Sims was born in Lancaster district, South Carolina, January 25, 1813. He attended the Franklin Academy in 1825, and later was sent to the South Carolina College at Columbia, from which he graduated in December, 1832. Speaking of himself at this time he says:

"I never was remarkable for anything while I was in college, except good behavior. Nobody ever expected anything of me, and I never expected anything of myself." What a mistake of the youth concerning the man who was to achieve the greatest reputation ever accorded to an American surgeon.

On the twelfth of November, 1833, he matriculated at the Charleston Medical School, where he attended lectures for one year, and in 1834 became a student at Jefferson Medical College, Philadelphia, from which he graduated in 1835. In May of that year he settled as a practitioner in Lancaster, but after a short period of discouragement removed in the fall of 1835 to Mount Meigs, Montgomery county, Alabama, where he was soon recognized as a clever doctor. While living here he volunteered in the Seminole war, and in an expedition against the Creek Indians. Returning from this public service, and ambitious for a larger field, he established himself in Montgomery, the capital of the State, in December, 1840.

The boldness and success of his operations in general surgery soon attracted a large clientele, which encouraged him to establish a private hospital, and within a few years he startled the professional world by the announcement of the cure, by an original method, of a series of cases of vesico-vaginal fistula. Up to that time there was not an authenticated successful treatment for this important surgical lesion, and when the science of obstetrics was in its infancy, there were thousands of women who, as a result of unskilled attendance in childbirth, were left in the most deplorable and loathsome condition by injuries to the bladder; they were, in fact, among the most wretched and pitiable of human beings, and attracted the

sympathy and attention of the enterprising young surgeon. He sought out a number of these helpless women, gave them shelter and free treatment in his hospital, and after several years of patient, anxious and persistent effort, finally succeeded in curing them. In the evolution of this operation he invented the silver-wire suture and duck bill speculum, the announcement of these successful cases attracting world-wide attention, and in many quarters being received with incredulity.

In 1853 he established himself in New York city, and in February, 1855, organized the State Hospital for Women, with this becoming the founder of the great science of gynecology. From the temporary structure at 83 Madison avenue, whence after nearly a half century, it was removed to the magnificent new building at 110th street and Morningside Heights.

In 1861 Dr. Sims for the first time visited Europe, and on the eighteenth of October of that year, at the Hotel Voltaire, successfully demonstrated his operation for vesico-vaginal fistula. Among those who witnessed this operation were some of the greatest surgeons of that age, Nelaton, Velpeau, Civiale, Baron Larrey, Sir Joseph Olliffe, Huguier and others. By this and other cases, his presence in Paris created a furore in medical circles. So great was the reputation achieved that he was called to all parts of Europe, not only to operate, but in consultation, and to treat various maladies in the department of gynecology; in fact, a short time saw him enjoying a most lucrative practice among the best people in European capitals. Upon one occasion, in attendance upon an important case, he became for several weeks the guest of the Emperor Napoleon at St. Cloud.

Near the close of his long and eminent career as a practitioner and teacher of gynecology, Prof. T. Gaillard Thomas, in an address to the graduating class of the Medical department of Cornell University, delivered at Carnegie Hall, said:

"If I were called upon to name the three men who in the history of all times had done most for their fellow men, I would say George Washington, William Jenner and Marion Sims."

Immediately after his death a movement for the erection of a statue in his memory was inaugurated in Europe and in his native country, and in 1894 there was unveiled in Bryant Park, New York city, a statue in bronze, a lifelike image of the great teacher, the spontaneous gift from his brothers in the profession throughout the civilized world, and from many of the unfortunate beings his genius and skill had benefited. In brief, yet comprehensive phraseology, the inscription tells the story of his career:

J. Marion Sims, M. D., LL. D.
Born in South Carolina, 1813. Died in New York City in 1883.
Surgeon and Philanthropist.
Founder of The Woman's Hospital of the State of New York.
His Brilliant Achievements Carried the Fame of American Surgery
Throughout the Civilized World.
In Recognition of His Services in the Cause of Science and Mankind
He Received the Highest Honors in the Gift of his Countrymen
And Decorations From the Governments of France, Portugal, Spain, Belgium, and Italy.

On the reverse:

Presented
To the City of New York
by
His Professional Friends,
Loving Patients,
and
Many Admirers
Throughout the World.

Marion Sims possessed a striking personality. With all his long and bitter struggle with poverty and for professional recognition and in his early days

for health and life itself, time had dealt gently with his form and face, whereon nature had set in unmistakable lines the stamp of greatness. Although he had rounded well the years allotted by the psalmist, his step was still quick and firm, his carriage erect, dignified and graceful. The frosts of age had not tinged the rich abundance of his dark-brown hair, which fell straight back from off the massive forehead, for the ever-active brain and the deep-seated, searching eyes of brown, asked always for the light. The brows were arched and unusually heavy and prominent; the nose beautifully proportioned and of Grecian type; the mouth well shaped, lips usually compressed, which, with the prominent chin, bespoke courage and firmness of purpose. His face was oval, clean-shaven and smooth, and the usual expression was of almost womanly sweetness, yet it was quick to vary in harmony with whatever emotion was predominant. Away from excitement and in the home life, his expression and actions were almost boyish. He never seemed to have forgotten that he was once a boy, and he would throw himself into a household frolic with all the abandon of his early days. He was courageous to a degree, and, although he rarely lost control of his temper, yet he was at times imperious and aggressive. When occasion demanded he was a good fighter, and fought his enemies with right good will; but he was quick to forgive, and just before his death he said one day, "I have forgiven all who ever did me wrong, with one exception." As said of him by a gifted orator, he possessed qualities ideal in the make-up of a truly great surgeon, "the brain of an Apollo, the heart of a lion, the eye of an eagle, and the hand of a woman.

A full list of his writings may be seen at the end of "The Story of My Life," New York, 1884. They include: "On the Treatment of Vesico-Vaginal Fistula," Philadelphia, 1853; "Silver Sutures in Surgery," New York, 1858; "Clinical Notes on Uterine Surgery," New York, 1866. J. A. W.

Original Articles.

Headache.

By J. O. Sanders, M. D., Anderson, S. C., Read Before the Anderson County Medical Society, February, 1912.

Headache is the name given to attacks of diffuse pain affecting different parts of the head and not confined to the tract of a particular nerve. It usually comes on by paroxysms at various intervals, but may be continuous. Headache is the most common of nervous symptoms, and the least studied and by far the most carelessly treated. Had our forefathers in medicine studied the pathological conditions of the chest, taking as a standard the one symptom, cough, we would know just about as much about conditions and pathological changes in the chest as we now know by taking headache as a distinct disease of its own. Headache being only a symptom, we will try in a brief way to mention a few of the most important causes of headache and their significance. We have organic and functional headaches. The organic headaches are characterized first by being continuous by coexistence of sleep disturbances, nausea, vomiting and by the association of gross physical signs pointing directly to gross lesions general or focal in character.

Functional Headaches.

We have first, headaches associated with Neuroses: (a) Neurasthenia, (b) hysteria; second, headaches of diathetic, toxic and infectious origin; third, headaches of the various viscera; fourth, headaches associated with various diseases of the blood. First, headaches associated

neurasthenia; this, as a rule, is a dull, diffuse pain or ache, suggest merely a sensation of fatigue of more or less severity, is generally located in the occipital region, in the upper part of neck over the brain, or just above the eyes. Often patient feels as though a tight band was around his head. The average neurasthenic headache is brought on or much exaggerated by mental work, and is usually relieved by complete rest.

In these neurasthenic patients we make the diagnosis by the other cardinal symptoms of neurasthenia; thus we have the patient's statements as regards easy fatigue, exhaustion, associated symptoms, circulatory and sleep disturbances—treatment same as for neurasthenia.

Hysterical Headaches. This class of headache generally the patient gives a very exaggerated statement as to the amount of pain, and if asked to locate pain will generally give small localized area and state that it seems at times as though the head was being beaten with a hammer, or some exaggerated statement as to severity.

Diathetic Headaches are not infrequently complained of by patients of gouty or rheumatic diathesis; they are more frequently found in persons who have passed middle life and in whom there is a history of exposure, deprivation or of excessive eating or drinking. Uremic headaches, while diffuse, is most pronounced in the occiput extending to the neck. Dizziness is almost always present, the patient is frequently dull and apathetic, and examination of the urine leads to a correct diagnosis. Diabetic headache is rather rare.

Toxic Headaches. Among toxic headaches we should always bear in mind headaches of alcoholic origin. The headache complained of by chronic alcoholics is generally widely diffused, dull in character, and more pronounced in frontal regions, and, as a rule, are more marked in the mornings. In all obscure cases of this character not only should a history of alcohol be sought for, but also of the excessive use of tobacco, coffee, tea, etc. In all cases of headaches suspected to be of toxic origin the condition of the alimentary canal should be carefully studied, for, in my opinion, a great many cases of headache are due to constipation, intestinal fermentation and decomposition of partial or incomplete digested food, giving rise to our old friend, auto-intoxication. We have gastric headaches associated with chronic gastritis. This can readily be detected by the pain being relieved by vomiting, and also by the pain being most severe while symptoms of indigestion are in evidence.

Ovarian and uterine diseases give us some very distressing headaches; this pain is almost always located in the top of the head, and is always accompanied by symptoms of pelvic diseases. Headaches due to affections of the special senses, while I think are of very great importance, still are very much exaggerated by constant use. These headaches are most liable to be confused with those of neurasthenia, and a careful examination by a competent oculist is the best way to clear up the diagnosis. Pain referred to the brow, the temples, or malar region are not infrequently due to disease of the nasal cavity or sinuses. In that region, and, in my opinion, if we would pay more attention to the nasal cavity and sinuses, we would get some wonderful results that a pair of gold rim specatcles fail to give. In all cases of obscure pain in temples in malar region the nasal cavities and sinuses should be thoroughly explored.

Headache due to anemia is rather common, especially among young women, doing a great deal of mental work with poor hygienic surroundings, also with women overworked and burdened with too frequent pregnancies; these are among the most dangerous class of patients, for they generally get the habit of taking all

kinds of headache dopes, and finally resort to opiates, and you all know the rest. I think of all classes of headaches we should guard most closely these anemic women.

One of the most common forms of headaches is rheumatism of the muscles of the scalp and neck. This can generally be recognized by the extreme tenderness of the scalp and sometimes small nodules at the insertion of the muscles.

Syphilitic Headache. This form of headache is rather relatively rare, but when consulted by one who was previously free from severe headaches, and who without a known cause is attacked by severe localized pain here and there, on the top of the head, pain which is decidedly worse at night after excitement and rarely ceases; it is well to remember that there is a possibility of syphilis. This form of headache is extremely severe, and soon debilitates the patient and renders him incapable of exertion.

Migraine is a nervous affection, characterized by severe attacks of headache occurring at irregular intervals. The pain is usually much worse on one side of the head. The onset generally has a prodromal stage, the patient has a desire to yawn, may be dizzy or have a feeling of pressure over the brow. Some times the patient wakes in the morning feeling perfectly well, and the pain begins in temples and extends back of the ears and rapidly grows worse. Soon nausea and vomiting begins, subsequently the pain subsides and the patient goes to sleep and generally wakes free from pain, and the attack is over.

There are a number of other causes of headaches, such as brain tumors, pachymeningitis, periosititis and many other organic diseases, which time forbids us mentioning here. A few words in regards to the general treatment. First try and find the cause of the headache. In the neurasthenic and hysterical type treat the disease and let the symptoms alone.

In this paper it is my intention to merely suggest some of the most common causes of headache, and stimulate a desire on our part to try and make a more thorough examination of our poor unfortunate headache patients. How many of us, if a patient comes to us complaining of a chronic cough, would prescribe for him without at least a pretense at an examination of the throat and chest, and yet these unfortunate headache patients come with the same old story of headache, which means about the same, and we, without much hesitancy, prescribe the same old dope that the "quacks" and druggist hand out over the counter. We sometimes wonder why these patients go to the druggist and get their remedies and fail to consult us, but if we will ponder a few moments the reason is simple.

Toxic headaches are almost always relieved by a thorough saline purge and close attention to the diet and digestive apparatus. Ovarian and uterine headaches, no treatment of the head does any good; remove the cause and the symptoms disappear.

Syphilitic Headache—Specific treatment, and if the pains are too severe, morphine is the only relief.

Anemic Headache—It is the one form that most can be done by treatment; rest, fresh air, forced feeding and give iron and arsenic.

Migranic—In these cases if the patient has the prodromal stages they can sometimes abort the attack by taking some light nourishment, stay in bed. Give large doses of chloral, bromides and caffeine and get to sleep if possible.

Experience has made us acquainted with a number of remedies and processes which may afford relief. The development of a diagnosis indicates the points where our aid may be offered. We know this much of headaches, that each individual case should interest the physician, and we know so little of its theory that

now, when positive laws are everywhere determined, the questions which have arisen should form a new stimulus to scientific endeavor.

Anoci-Association—A New Principle in Operative Surgery.

By G. W. Crile, M. D., Surgeon to Lakeside Hospital, Cleveland, Ohio, Address Delivered Before the South Carolina Medical Association, Columbia, S. C., April 17, 1912.

My first duty is to thank you for the honor you have conferred on me by your invitation to address you on this occasion.

I have chosen for my subject the consideration of methods for further reducing the risks of surgical operations. The technique of operations on the pelvic organs, the appendix, the intestines, gallbladder, stomach, breast, neck and extremities is at present standardized and there are hosts of men in every part of the world who are daily performing technically perfect operations. What is needed is some further control of the vital processes of the body, so that the results of the technique as now practical will be improved both as to the risk to life and post operation impairment.

I will now present the data upon which such a principle is based.

Man is primarily a motor, being constructed by the process of adaptation to environment in the struggle for existence. There are two principal parts of this motor mechanism: 1st. The part which perceives his relations to the material world (environment) — the principal mechanisms are those which perceive changes in the waves of light and the waves of air, the clinical qualities, and various grades of physical contact. The adequate stimulation of these mechanisms produce seeing, hearing, taste, smell, touch, pain and tickle sensations. It is through associative memory that this type or that type of response of the individual as a whole is made. A given stimulus which causes an association, may benefit the individual (bene association), or it may harm the individual (noci-association). Now, a surgical operation performed upon a patient whose receptor mechanisms are not suspended by anesthetics or narcotics, causes an adequate stimulus of one or more of the receptors, hence causes a stimulation of the motor mechanism as a whole; that is, of the individual as a whole. If the activity of the various receptor mechanisms is suspended, then the operation may be performed without stimulating the motor mechanism at all; that is to say, there will be no noci-association. That state of the patient can be described only by coining a new word, namely, *a noci-association.*

Since this is a new theme and a new principle, a statement of the principal evidence on which it rests will be made.

When a barefoot boy steps on a sharp stone there is an immediate discharge of nervous energy in his effort to escape from the wounding stone. This is not a voluntary act. It is not due to his own personal experience (namely, his ontogeny), but is due to the experience of his progenetors during the vast periods of time required for the evolution of the species to which he belongs, *i. e.*, his phylogeny. The wounding stone made an impression upon the nerve receptors in the foot similar to the innumerable injuries, which gave origin to this nerve mechanism itself during the boy's vast phylogenetic or ancestral experience. The stone supplied the phylogenetic association, and the appropriate discharge of nervous energy automatically follows. If the sole of the foot is repeatedly bruised or crushed by the stone, shock may be produced. If the stone be only lightly applied then there is also a discharge of nervous energy from the sensation of tickling. The body has had implanted within it in a similar manner

other mechanism of ancestral or phylogenetic origin whose purpose is the discharge of nervous energy for the good of the individual.

The word anesthesia, *meaning without feeling,* describes accurately the effect of ether, an anesthetic dosage. Although no pain is felt in operations under inhalation anethesia, the *nerve impulse set up* by a surgical operation still reach the brain. We know that not every portion of the brain is fully anesthetized, since surgical anesthesia does not kill. The question then is, what effect has trauma under surgical anesthesia upon the part of the brain *that* remains awake? If, in surgical anesthesia, the traumatic impulses cause an excitation of those wide-awake cells, are the remainder of the cells of the brain, despite anesthesia, influenced in any way? If influenced, they are prevented by the anesthesia from expressing the same in conscious preception or in muscular action. Whether the *anesthetized* cells are influenced or not must be determined by noting the physiologic function after anesthesia has worn off, and in animals by an examination of the brain cells as well. It has long been known that the vasco-motor, the cardiac and the respiratory centers discharge energy in response to traumatic stimili applied to various sensitive regions of the body during surgical anesthesia. If the trauma is sufficient, exhaustion of the entire brain is observed after the effect of the anesthetic is worn off; that is to say, despite the complete paralysis of voluntary motion and the loss of consciousness due to ether, the traumatic impulses that are known to reach the *awake* centers in the medulla, also reach and influence every other part of the brain. As to whether or not the consequent functional depression and the more phylogic alterations seen in the brain cells may be due to the low blood pressure, which follows excessive trauma, is answered by the following experiments, viz., the circulation of animals was first rendered static by over transfusion, and was controlled by a continuous blood pressure record on a drum, the factor of anemia was wholly excluded during the application of the trauma, and during the removal of a specimen of brain tissue for hystologic study. In every such instance morphologic changes in the cells of all parts of the brain were found, but it required more trauma to produce equal morphologic changes in animals protected against low blood pressure than in animals whose blood pressure gradually declines in the course of the experiment.

In the cortex and in the cerebellum, the changes in the brain cells were in every instance more marked than in the medulla. There is also strong *negative* evidence that traumatic impulses are not excluded by ether anesthesia from the part of the brain that is apparently asleep. This evidence is as follows: If the factor of fear be excluded, and if in addition the traumatic impulses are prevented from reaching the brain by cocaine blocking, then, despite the intensity or the duration of the trauma within the zone so blocked, there follows no exhaustion after the effect of the anesthetic disappears, and no morphologic changes are noted in the brain cells. A still further negative evidence that inhalation anesthesia offers little or no protection to the brain cells from trauma, is derived from the following experiment: A dog whose spinal cord has been divided at the level of the first dorsal segment, and then kept in good condition for two months, showed a recovery of the spinal reflexes, such as the scratch reflect, etc. This animal is known as a "spinal" dog. Now, in this animal the abdomen and hind extremities have no direct nerve connection with the brain. In such a dog a continuous severe trauma of the abdominal viscera and of the hind extremities lasting four hours caused not the slightest change in either the circulation or respiration, and no

microscopical alteration of the brain cells. Judging from a large number of experiments on *normal* dogs under ether such an amount of trauma would have caused not only a complete physiologic exhaustion of the brain, but also morphologic alterations of all of the brain cells and physical destruction of many. We must, therefore, conclude that although ether anesthesia produces unconsciousness it *apparently protects none of the brain cells* against exhaustion from the trauma of surgical operations; ether is, so to speak, but a veneer. Under nitrous oxide anesthesia there is approximately only one-fourth the exhaustion of equal trauma as under ether; either nitrous oxide protects or ether predisposes to exhaustion under trauma. With this as a point of departure we will inquire into the cause of this exhaustion of the brain cells.

On the cause of the exhaustion of the brain cells from trauma *of various parts of the body under inhalation anesthesia.*

Numerous experiments on animals upon the effect of ether anesthesia *per se, i. e.,* ether anesthesia without trauma, showed that all those certain changes were seen there was neither characteristic physiologic exhaustion after the anesthesia had worn off nor were there seen the characteristic changes in the brain cells. Turning to trauma, in a study in the behavior of individuals as a whole under deep and under light anesthesia, we at once found the cue to the discharge of energy, the consequent physologic exhaustion and the morphologic changes in the brain cells.

If, in the course of abdominal operations, rough manipulation of the perietal peritoneum is made, there is frequently observed a marked increase in the respiratory rate, and an increase in the expiratory forces, even to the extent of an audible expiratory groan. Under light ether anesthesia severe manipulation of the peritoneum often causes such vigorous contractions of the abdominal muscles, that the operator is greatly hindered in his work.

Among the unconscious responses to trauma under ether anesthesia, are purposeless moving, withdrawing of the injured part, and if the anesthesia is sufficiently light and the trauma sufficiently strong, there may be an effort directed toward escape from the injury. In injury under ether anesthesia every grade of response may be seen, from the slightest change in the respiration or in the blood pressure to a vigorous defensive struggle. As to the purpose of these subconscious movements in response to injury there can be no doubt, *they are efforts at escape from the injury.*

Can anyone picture the actual result of a formidable abdominal operation extending over a period of half an hour or more in an unanesthetized human patient if extensive adhesions are broken up, or if a large tumor is disloged from its bed? In such a case, would not the nervous system discharge its energy to the utmost in efforts to escape from the injury, and would the patient not suffer complete exhaustion? If the traumata, under inhalation anesthesis, be sufficiently strong and repeated in sufficient numbers, the brain cells will finally be deprived of their dischargable nervous energy and become exhausted just as exhaustion follows a strenuous and too prolonged muscular exertion; for example, such as is seen in endurance tests. Whether the nerve energy of the brain is discharged by injury under anesthesia, or whether by ordinary muscular exertion, identical morphologic changes are seen in the nerve cells. In shock from injury, in exhaustion from overwork (Hodge & Dolley), and in exhaustion from pure fear, the general functional weakness is similar—in each a certain length of time is required to effect recovery, and in each there are morphologic changes in the brain cells. It is quite clear that in each of these cases the altered function and

form of the brain cells are due to an *excessive discharge of nervous energy.* This brings us to the next question, viz., what determines the discharge of energy from trauma with or without inhalation anesthesia?

The Distribution of the Emotions in Nature.

We will first consider *fear.* I believe that it can be shown that the emotion of fear can be elicited only in animals that utilize a motor mechanism in defense against danger or escape from it. The defense of the skunk is a diabolic odor, which repels its gross enemies. The skunk has no adequate equipment for defense or escape by muscular exertion. The skunk has little or no fear. Certain species of snakes are protected by venom. They possess no other adequate means of defense or escape. They show little or no fear. Other animals, because of their prowess, have but few fears. The lion, the grizzly bear and the elephant are examples. Animals having armored protection, as the turtle, have little fear. It is obvious that fear is not universal. Apparently the emotion of fear is felt only in those animals whose self-preservation is dependent upon an *uncertain* adequacy of their powers of muscular exertion either in defense or in flight.

What are the principal phenomena of fear? They are palpitation of the heart, acceleration of the rate and alteration of the rhythm of the respiration, cold sweat, rise in body temperature, tremor, pallor, erection of the hair, suspension of the principal functions of digestion, muscular relaxation, fixation of the muscles of the eyes, dilation of the pupil. The function of the brain is wholly suspended, except that which relates to the self-protective response to the object feared. Neither the brain nor any other organ of the body can respond to any other lesser stimulus during the dominance of fear.

From the foregoing it would appear that under the influence of fear, most, perhaps all of the organs of the body, are divided sharply into two classes: first, those that are *stimulated,* and, second, those that are *inhibited.* Those that are stimulated are the entire muscular system, vasco-motor and loco-motor systems, the senses of perception, the respiration, the mechanism for erecting the hair, the sweat glands, the thyroid gland, the adrenal gland (Cannon), and the special senses. On the other hand, the digestive and the procreative functions are inhibited. What is the significance of this grouping? So far as we know the organs stimulated include those, and only those, that increase the efficiency of the animal for fight or for flight. It is through skeletal muscles that the physical attack or escape is affected—these muscles alone energize the claws, the teeth, the hoofs and the means for flight. The increased action of the heart and the adrenalin stimulation of the blood vessels greatly increases the efficiency of the circulation; a much-needed increased efficiency to force the blood into actively contracting muscles; the increased action of the thyroid gland augments metabolic activity; there is evidence that glycogen is actively called out, it being the most immediately available substance for the production of energy; the increased activity of the respiration is needed to supply the greater requirements of oxygen and the elimination of the increased amount of waste products; the dilation of the nostrils affords a freer intake of air; the increased activity of the sweat glands is needed to regulate the rising temperature of the body due to the increased metabolism. The activity of the organs of perception—sight, hearing, smell, are heightened so that the nature and the source of the danger may, with the greatest certainty and accuracy, be appreciated. It could not be a mere coincidence that the organs and the tissues that are stimu-

lated in the emotion of fear are precisely those that are actually utilized in the perception of danger, and in a physical struggle for self-preservation which might follow. Among the organs inhibited are those that have mainly to do with digestion and procreation. Why are these functions inhibited? If an animal could dispense with his bulky digestive organs, whose functions are suspended by fear, if he could, so to speak, clear his decks for battle, it would be advantageous. Although the marvelous versatility of nature selection apparently could devise no means of affording this advantage, it turned off the nervous current to these organs and saved the vital force those *noncombatants* ordinarily consume in the performance of their functions. Whatever the origin of fear may be, its phenomena are apparently due to a *stimulation of all* the organs and tissues that add to the efficiency of a physical struggle for self-preservation through the motor mechanism, and *inhibition* of the function of the organs that do not participate—the noncombatants, so to speak. Fear arose from injury, and is one of the oldest and surely the strongest emotion. By the slow process of empyricism nature evolved the wonderful defensive mechanism of many animals and of men. Now, the stimulation of this mechanism leading to a physical struggle is action; and the stimulation of this mechanism without action is emotion.

We may say that fear is a *phylogenetic fight or flight;* we fear not in our hearts alone, not in our brains alone, not in our viscera alone; fear influences every organ and tissue—each organ and tissue is stimulated or inhibited according to its use or hindrance in the physical struggle for existence. In thus playing all or most of the nerve force on the nerve muscular mechanism for defense alone, a greater physical power is developed. Hence, it is that animals under the stimulus of fear are able to perform preternatural feats of strength. Then, too, for the same reason the exhaustion following fear will be greater, because the powerful stimulus of fear drains the cup of nervous energy, though no visible action may result. An animal under the stimulus of fear may be likened to an automobile with the clutch thrown out, but whose engine is racing at top speed. The gasoline is being used up, the machinery is being worn out, but the machine as a whole does not move, though the power of its engine may cause it to tremble.

Applying this conception to human beings of today, certain mysterious phenomena are at once cleared up. It must be borne in mind that man has not been presented with any new organs to meet the requirements of his present state of civilization—indeed, not only does he possess the same type of organs as his savage fellows, but also the same type of organs possessed by even the lower animals. In fact, the present status of civilization of man is now operated with the primary equipment of brutish organs. Contrasted with the entire duration of organic evolution, man has come down from his arboreal abode and resumed his new role of increased domination over the physical world but a moment ago. And now, though sitting at his desk in command of a complicated machinery of civilization, when he fears a business catastrophe, it is, in the terms of his ancestral physical battle, in the struggle for existence. He cannot fear intellectually, he cannot fear dispassionately, he fears with all of his organs and the same organs are stimulated, and the same organs are inhibited as if, instead of its being a battle of credits, or position or of honor, it were a physical battle with teeth and claws. Whether the cause of acute fear is nomral, financial, social or stage fright, or purely physical, precisely the same phenomena are seen. The phenomena are those of physical exertion in self-defense or escape. There is not one group of

phenomena for the acute fear of the president of a bank in a financial crash; another for the trusted official who suddenly and unexpectedly faces the naked probability of the penitentiary or of a patient who unexpectedly finds he has a cancer, or of the hunter with an empty magazine and the grizzly still charging. Nature has but one means of response, and that means was acquired through vast periods of evolution, during which our progenitors struggled with bare hands and naked bodies against wild beasts, and now whatever the cause of fear the phenomena are always the same—always physical.

From the foregoing and from other considerations in biology, in physiology, and the clinic, we are forced to conclude that man is, as Sherrington has well said, "a motor being." The mechanism that may be excited and which may become exhausted, and later deranged, in the course of a surgical operation, is the motor mechanism. The particular part of the motor mechanism that is subject to exhaustion is the brain cell. An adequate stimulus of any receptor, whether of special senses or the pain, impinges upon the brain cell and modifies it. Each time this occurs the brain cell responds by giving up a certain amount of its energy; that is to say, the sight of the operating room, the spoken word implying danger, the taking of the anesthetic and the instrumental injury of tissue in the course of operation, and the pull of the stitches after the operation, all are capable of stimulating the brain cells, and thereby causing them to use up their energy-giving substance. Excluding infection and hemorrhage, one could conceive of no influence whatsoever aside from the factors mentioned that plays any part in the production of surgical shock, post operative pain and later neurasthenia. Let us now picture the contact of a patient with his surgeon from the time of consultation until the patient is finally discharged. This contact may be divided into the following principle parts:

The first consultation, the period at the hospital up to the beginning of anesthesia, the anesthesia, the operation itself and the convalescence. At any one of these points of contacts the patient may receive injury in consequent impairment to the brain cells. The want of tact in stating a diagnosis and recommending an operation may cause a very material mental shock; the lack of consideration of the patient after he enters the hospital up to the time that the anesthesia is begun may fill the patient with fear, hence injury to the brain cells; the kind of anesthesia and its methods of administration may cause great excitement, hence further damage to the brain cells; every contact during the operation initiates impulses which reach the brain cells and further impairs them; and finally, inconsiderate nursing, rough dressings, and tactless contacts in the hospital during convalescence may add to the sum total of injury. The critical question now arises, and it is this: What can be done to minimize or fully abolish these several factors? First, it is only by experience and a sympathetic understanding of the sensibilities of patients that enables any surgeon at the time of diagnosis and recommendation of operation, to reduce to a minimum the first contact. The preoperative stay in the hospital can be made least harmful by the highest degree of efficiency on the part of the nursing and resident staff of the hospital, and by considerate attention to the details on the part of the operating surgeon, together with the administration of a small dose of morphia and acopalomine an hour and a half or two hours before the operation. As to the anesthetic, there are three factors; the first is, entire quiet and avoidance of everything suggesting the operation until the patient is unconscious; the second is, the use of the pleasant nitrous oxide anes-

thesia, instead of the repulsive ether, and thirdly, the administration of the anesthesia by a trained anesthetist, preferably a woman. The post operative backache is wholly prevented by a warm water bed on the operating table, and propping a patient up underneath after operation.

If the patient has received no damaging brain stimuli up to the point of the completion of anesthesia, the next question is: How can the damaging stimuli incident to the operation itself be prevented or minimized? It may be done by the use of novocaine infiltration throughout the entire field of operation as completely as if general anesthetic was given. Under these circumstances the brain remains in a completely negative state during the entire operation, and no damage has been done to the brain cells; hence, no surgical shock up to this point has been given.

The next point arises is: How can we prevent the severe after pains so characteristic following abdominal operation —the so-called gas pains associated with distention, and rigidity of the abdomen? First, let us consider the cause of these post-operative phenomena.

On the Cause and the Prevention of Post-Operative Gas Pains.

The phase, post-operative gas pains, is intended to include a definite group of phenomena following operations, which involve the peritoneum. These phenomena are painful rumbling of gas in the intestines, with inability to pass flatus, associated with distention, and some rigidity. The gas tends rather to come up into the stomach and may be reductated. The patient, especially if a physician, is frequently under the impression that there is obstruction, either mechanical or paralytic. There is anorexis, sometimes nausea or vomiting, and to a certain degree there is anxious facies. The abdominal pain and distention is in some cases distressing, and is a strong rival of ether anesthesia as the most unpleasant memory of a major operation. So far as I am aware, there has yet been discovered no means of preventing it.

It is overcome measurably by enemata, and as soon as there is a free movement it disappears. The suffering is mitigated by hot packs and opiates.

This annoying, baffling phenoment is associated only with operations that involve the peritoneum; but not every operation that involves the peritoneum is followed by it. Incision and simple drainage of local abscesses, incision without suturing the peritoneum, especially immune are incisions into the peritoneum in vaginal punctures.

These, roughly speaking, are the types of operation that cause little or no gas pains. On the other hand, the more nearly normal the peritoneum and the more healthy the individual, the more marked is the gas pain. They follow most heriotomies, appendectomes, gastric, gall-bladder, pelvic, and many renal operations; very marked gas pains follow the cases in which a rough and persistent exploration is made.

On reflecting upon the origin and the nature of this interesting phenomenon, it occurred to me to seek its origin in a general biologic law of adaptation, viz.: That when the abdomen is penetrated, the phylegenetic association awakens the adaptive inhibition of the intestine, so as to place the animal in the best state to overcome two types of dangers following perforations. These are escape of intestinal contents, and spread of infection. Loss of appetite and muscular rigidity, and even vomiting, are also protective measures. Surgical procedures could have played no role in natural selection, and evolution does not recognize surgical operations. The one and only response that be made is a purely biologic one.

Now, my hypothesis of adaptive phenomena can be easily put to a direct test,

as follows: The patient is anesthetized as usual, but the entire line of incision is carefully blocked with novocaine, including the peritoneum. If then, at the end of the internal operation and before the peritoneum is closed, there is applied around the entire line of stitches a complete block that will last a number of days, such as quinine and urea hydrochlorate, and if in stitching the peritoneum every stitch is placed within this blocked zone, then the afferent impulses caused by stitch irritation are blocked, and hence cannot excite this protective mechanism of intestinal inhibition. On trial of this method, it was found that such blocking does prevent post-operative gas pains in all sorts of abdominal operations. The hypothesis is a part of the general principle of adaptation.

A patient managed in this manner will have had excluded the various harmful influences or associations, which can be best designated by the word "Anoci-Association;" that is, nocuous or harmful association. All the various factors which may injure the brain cells are noci-associations. If, then, we so conduct the patients from beginning to end through his surgical contact that *noci-associations* are excluded this state is best described by the new word "Anoci-Association."

The principle here enunciated has been tested in a series of over 3,000 operations by myself. This includes surgical risks of every description, both private and ward patients in the Lakeside Hospital. The mortality rate which includes death from any cause in the hospital is 2.1 per cent.

In the last 1,000 the rate has fallen to 1.8 per cent.

But the most striking result is the almost incredible state of preservation of the patient's nervous equilibrium and the great diminution of post-operative discomfort.

These is no post-operative nausea or vomiting, except that due to the disease or the mechanics of the operation; no backaches; little or no gas pain or distension; the pulse rate is never increased during the operation, not even in severe cases of Graves' Disease, and excepting in Graves' Disease, the pulse rate after the operation rarely shows a post-operative rise. Wound pains are minimized by preventing the irritation of the dressings by using a sterilized wire screen as a protection over it; the use of the stomach tube is almost unknown; the recovery room is no longer required, the patient going back immediately to the bed he came from, the work of the nurse is greatly minimized, and above all, more than 90 per cent. of patients thus operated have no unpleasant recollection of the day of their operation.

Summarizing, we may say that many diseases act upon the brain cells injuriously. Fear and trauma act in a similar manner. Thus may the margin of safety in a surgical case be reduced. The conservation of this margin of safety is our problem. If fear be excluded, and if the nerve paths between the field of operation and the brain be blocked with local anesthesia, there will be no discharge of energy due to the operation; hence, there can be no shock, no exhaustion. Under these conditions of operation the nervous system is protected against noci-association, whether by noci-perceptors or by an adequate stimulation of noci-ceptors. The state of the patient, in whom all noci-associations are excluded, can be described only by coining a new word. That word is "Anoci-Association." This new principle robs surgery of much of its harshness, and diminishes its dangers.

Department of Public Health

The act of the last Legislature, given below, is of so much importance to the profession and the public that we wish to call special attention to it. The State

Board of Health wishes to safeguard the health of the people to the remotest rural districts, and this can only be done effectively when the profession and the people understand its resources and powers. It will be worth the time for every doctor and every citizen to carefully go over the act, and, after the rules shall have been promulgated by the Executive Committee, to utilize the privileges thus offered.

AN ACT

To Authorize the Executive Committee of the State Board of Health to Adopt, Promulgate and Enforce Rules and Regulations for the Betterment and Protection of the Public Health of the State of South Carolina.

Section 1. *Be it enacted* by the General Assembly of the State of South Carolina, That the Executive Committee of the State Board of Health shall have the power to make, adopt, promulgate and enforce reasonable rules and regulations, from time to time, requiring and providing for the thorough sanitation and disinfection of all passenger cars, sleeping cars, steamboats, and other vehicles of transportation in this State, and also of all convict camps, penitentiaries, jails, hotels, schools and other places used by or open to the public; to provide for the care, segregation and isolation of persons having, or suspected of having, any communicable, contagious or infectious disease; to regulate the method of disposition of garbage or sewage, and any like refuse matter in or near any incorporated town, city or unincorporated town or village of the State; to provide for the thorough investigation and study of the causes of all diseases, epidemics, and otherwise, in this State, and the means for the prevention of contagious disease, and the publication and distribution of such information as may contribute to the preservation of the public health and the prevention of disease; to make separate orders and rules to meet any emergency not provided for by general rules and regulations, for the purpose of suppressing nuisances dangerous to the public health and communicable, contagious and infectious diseases, and other dangers to the public life and health: *Provided, however,* That nothing herein contained shall be construed as in anywise limiting any duty, power or powers now possessed by, or heretofore granted to, the said State Board of Health or its Executive Committee by the statutes of this State, or as affecting, modifying or repealing any rule or regulation heretofore adopted by said board.

Sec. 2. That any person who shall, after notice, violate, disobey, refuse, omit or neglect to comply with any rule of said Executive Committee of the State Board of Health, made by it in pursuance of this act, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined not exceeding the sum of one hundred dollars, or imprisoned for thirty days: *Provided,* This section shall not apply to any person until the rules of the State Board of Health are promulgated.

Society Reports.

Charleston County.

The South Carolina Medical Society (Charleston county) held a regular meeting April 1, 1912. Dr. A. E. Baker read a paper on "The Value of the Differential Blood Count in Surgery." He showed where it assisted in making the diagnosis, and how essential it was at times.

Dr. C. M. Rees thought that one or two counts meant little. The count must be made frequently, and even then is only of approximate assistance. To him blood counts have been somewhat disappointing.

Dr. C. W. Kollock reported a recent case of cerebral abscess, which was diag-

nosed by means of the X-ray and blood counts.

Dr. Cornell spoke of the value of the differential blood count aside from surgery when often it gave a valuable clue as eosinophilia. He found the total white count seldom necessary, but the differential most important.

Dr. Robert Wilson stressed the necessity of obtaining signs and symptoms, which are more important that the blood count. But in some cases the examination of the blood will just give enough evidence upon which to make the diagnosis.

Under Medical News, Dr. C. M. Rees stated that a tumor which he had recently removed from the abdominal wall, and which had arisen apparently from the petritoneum had been examined and found to be a leiomyoma undergoing colloid degeneration.

Dr. A. E. Baker reported having operated on a married woman, aged 28, having the diagnosis of appendicitis, because of the symptoms and misleading history. Upon opening the abdomen it was found to contain fresh blood. Secondary hemorrhage of ectopic gestation was then occurring.

Dr. Rutledge spoke of the irregular menstrual history during ectopic gestation, and then reported the case of normal pregnancy he had recently seen in which the woman menstruated during the whole pregnancy.

Dr. Kollock reported having seen a post-pharyngeal abscess in which case there was strangely no pain or tenderness. Upon incision there was a copious discharge of pus.

Dr. Robert Wilson stated that he had recently seen a case of typhoid fever in which there was a profuse scarlatiniform eruption on the legs and abdomen.

The Society then adjourned.

On April 15, 1912, the South Carolina Medical Society (Charleston county) held its mid-monthly meeting. Dr. E. F. Sparkman read a paper on "The Prophylaxis of Infectious Diseases and Their Periods of Quarantine." He urged better health ordinances and the co-operation of the physicians with the department of health.

Dr. J. F. Townsend discussed the paper.

Dr. A. J. Buist spoke of the apparent transmission of certain diseases by bedding and other articles. He approved of the placarding of houses containing a patient with whooping cough.

Dr. C. W. Kollock also spoke in favor of this, and urged more prompt reports to health department.

Dr. Rhame cited several instances in which contagious diseases were not placarded.

Dr. Burn questioned any definite period of contagion for scarlet fever, as months elapse before a second case occurs in the same house. Also houses or rooms are quarantined and disinfected, and still cases recur there.

Dr. Sparkman then replied. He stated that measles is a reportable disease, but is never reported. Most contagious cases are released too soon. Frequently disinfection is valueless, because articles are removed from room before this is carried out.

Dr. Kollock presented a case on which he had done Killian's operation some months ago. The scar was hardly noticeable until sought for. He also showed several radiograms of the sinuses before and after the operation.

Dr. G. F. Wilson reported a case which he had been treating, in which there was a tachycardia, enlarged thyroid and a little exopthalmos. In addition there were tubercle bacilli in the sputum, and some lung involvement. A few days ago the woman died from pulmonary tuberculosis, and a few minutes after death both eyeballs "popped out of their sockets." The muscles, optic nerve and capsule were completely torn loose, and one eye

was on the pillow and the other eye was still held by tissue, but was out of the socket. This happened 15-20 minutes after death. The balls had collapsed and the vitreous escaped. Dr. F. Wilson asked for some explanation. Dr. Kollock and others suggested several possibilities, but no theory seemed entirely satisfactory.

There being no further business, the Society adjourned.

R. M. Pollitzer,
Corresponding Secretary.

Minutes of the Fourth Annual Meeting South Carolina Society of Medical Secretaries.

Columbia, S. C., April 16, 1912,
Dining Room at Colonia Hotel.

The South Carolina Society of Medical Secretaries met at breakfast. The chairman, Dr. C. C. Gambrell, being absent, Dr. Burdell was made temporary chairman. The minutes of the last meeting were read and approved. There being some inconsistency in the Constitution and By-Laws, it was moved and carried that the chairman make the necessary changes. Dr. G. A. Neuffer being called on for some remarks relative to the work and importance of the Society, urged the necessity of having a full attendance at these meetings each year, so that the secretaries might together work out the many problems which confront them. Dr. Hines stated that the change in the association rules, which will permit the State Secretary to collect dues from members of county societies where the county secretary had failed to do so, on account of incomplete organization, and the combining of the offices of secretary-treasurer and editor are expected to aid materially in the work of the State Association, and will greatly facilitate matters for State and county secretaries. Dr. Hines also thinks that the councilors should visit the societies in their districts more freely than they have been doing in the past, even if they are not specially invited. The names Drs. G. A. Neuffer and J. G. Edwards, were added to the membership roll. The following officers were elected for the ensuing year:

Chairman, Dr. J. W. Burdell, Kershaw; vice chairman, W. A. Carrigan, Society Hill; secretary-treasurer, L. Rosa H. Gantt, Spartanburg.

The chairman appointed as executive committee, Dr. E. W. Carpenter, Greenville; Dr. J. G. Edwards, Edgefield, and Dr. Sophia Brunson, St. Matthews.

There being no further business before the Society it adjourned to meet again on the third Wednesday in April, 1913.

L. Rosa H. Gantt,
Secretary.

Spartanburg County Medical Society.

The Spartanburg County Medical Society held its April meeting on the 26th instant, neither of the essayists were present, so no papers were read, but a very general discussion of typhoid fever was entered into. After Dr. Norman had reported a case of five weeks' duration, in which all of his efforts had failed to reduce the temperature, Dr. Williams reported an obstetrical case of unusual presentation, both hand and feet presenting.

Dr. Baxter Haynes, who has recently moved from Cliffside, N. C., to Spartanburg, was elected a member of the Society.

On account of the crowded conditions of our hotels with guests for the music festival, it was impossible to have the usual dinner after the meeting.

Program for May 31, 1912:

"The Relation of Wholesome Food to Good Health, the Proper Food for School Children," L. J. Blake, M. D.; discussion, A. R. Fike, M. D., and J. H. Allen, M. D. "The Anatomy and Physiology

of the Spinal Cord," W. G. Sexton, M. D.; discussion, J. H. Hunter, M. D., and W. B. Lancaster, M. D.

L. Rosa H. Gantt,
Secretary.

Williamsburg.

The regular monthly meeting of the Williamsburg County Medical Society was held Wednesday, April the 24th, instead of the 17th, which was the date of the State meeting.

Present were: Drs. W. L. Wallace, W. G. Gamble, D. C. Scott, C. D. Jacobs, E. T. Kelley, W. V. Brockington, and J. C. Beckman.

Dr. Woods, of Florence, was to address the meeting, but was unable to be present. He will address the May meeting.

Dr. E. T. Kelley, having returned from New York, where he had been attending post-graduate clinics, was requested to speak at the May meeting.

There were no nominations nor elections.

Contagious diseases reported—measles, whooping cough and typhoid fever.

There being no further business, adjournment was in order.

J. C. Beckman, Sec.-Treas.

Current Medical Literature.

The Conservation of Hearing.

In the March 15, 1912, number of the *Journal of the Indiana State Medical Association* Dr. John F. Barnhill makes a plea for more careful examination of children by the general practitioner, with reference to the ear. He says too many doctors advise that the children will "out grow" many of the defects of the auditory apparatus, and that such is not the case. Barnhill urges that in the efforts for conservation along so many lines today that the function of hearing be not overlooked. He further says:

"Viewing the chief causes of aural disease as due to an obstructed and diseased environment, the problem of conservation of hearing becomes much simplified. It is not at all unlike the problem of securing better general health by improvement of environments in which the individual or community lives. Public health has been vastly improved by ventilating dark places and eradicating general foci of infection. The hearing of the oncoming generation may be vastly conserved by providing for free ventilation of the tympanic spaces of every child's ears, and by breaking up and thoroughly eradicating the foci of infection that find so convenient breeding place in diseased states of the nose, nasopharynx and pharynx of the child; more simply stated, in the complete removal of all hypertrophies and new growths. This cleanup of the foul places that so often exist in the throats of children cannot be postponed indefinitely if conservation of hearing is sought. Ideal conservation would demand such a cleanup early, before the hearing is noticeably affected, because the chances of improvement decrease in the ratio of time elapsed since the oncoming of the aural affection. In view of what may be accomplished by early attention to the upper air tract of the child it seems eminently worth while to bestow attention on the defects of this region at a time when the efforts are undoubtedly worth while. By so doing future deafness would be in great measure prevented."

The Treatment of Tuberculosis in New York City.

In the *New York Medical Journal* for May 4, 1912, Dr. Nathan N. Stark says:

"The Tuberculosis Camp of the New York Throat, Nose and Lung Hospital comes as near to being the ideal method

of treating tuberculosis in our city as any method or system devised by any institution up to the present time. No patient is admitted to the camp unless he has a fit case, by that meaning a patient who shows physical changes in the lungs or throat, but never to an advanced degree. Our patients are all tuberculosis, and our institution is not a preventorium. The patients we admit would probably not gain admission to any sanatorium, because of the degree of infection. You must know that a large percentage of the patients admitted to the large out-of-town sanatoria do not show changes in the lungs. We do not admit patients whose prognoses are bad, nor do we admit a patient whose symptoms are such that he will be a nuisance and a disturbance to other inmates. In no case will we keep a patient who annoys the camp at night by excessive coughing, for we believe that our patients must sleep well at night to get well.

Our patients are kept in the open air twenty-four hours a day, no matter what the weather. The day camp is provided with a shed, so that in case of rain or snow, there is no reason for coming indoors. The night camp consists of one large ward or room, twenty by fifty feet, and twenty feet in height, open on three sides, and provided with shutters which can be set at any angle to avoid storm and wind. The ceiling is almost entirely open and provided with devices to protect against the elements. Those windows are never closed, so that the temperature of the ward is almost the same as that of the outside air. We give plenty of bed clothing and clothes, so that there is never any complaint of the cold. I have yet to see the patient who has not slept better his first night in the camp than for many previous nights. Our patients are instructed how properly to take care of themselves, and how to protect others from infection. The staff quickly learns of any infringement of the sanitary rules, for the patients will not tolerate any one who does not live up to the laws of cleanliness. The patients take a cold shower bath on arising. The bathroom is warm and adjoins the dressing and locker rooms; it is steam heated and most comfortable. Here the patients undress and quickly run to the ward to bed.

To build up our patients, to increase their weight and strength, we have depended entirely upon giving the right kind of food and plenty of it. We have at no time used medical means, by that meaning that we never allow the patients to take preparations of fat or oil during their stay in the camp. The medical men connected with the camp are all particularly interested in diet, and have made the food question a point of study. We believe that open air life, plenty of rest with mental diversion, and the right kind of food in sufficient quantity, will arrest and cure tuberculosis, not only in the mountains, but also in New York city."

Hot Springs, Ark.

The following excerpt from the *Journal of the Arkansas Medical Society*, April, 1912, may help to clear up some doubtful points in the minds of those who have no personal opportunity to investigate the subject:

"According to story, tradition and song, the Arkansas Hot Springs have been noted and famous for centuries. That the first American, the Red Men, knew of and were liberal patrons of this now world-celebrated resort there can be but little doubt. It is a tradition here that these Hot Springs were used by many Indian tribes as a truce ground where the sick and afflicted came for relief, and where the instruments of warfare were stacked and the pipe of peace smoked until health was restored. It is equally true that these wonderful springs of health-giving wonders was the Foun-

tain of Youth so much sought by that grand old cavalier, Ponce de Leon, and this was the objective point he had in view when he sailed from sunny Spain and landed on the coast of Florida, seeking some waters where it was understood, even at that day, youth would be restored and life again made worth while by health.

"During President Jefferson's term he sent representatives of the government here, and an investigation of the waters and surrounding country was made, but nothing further looking to the government taking over the springs was done until 1832, when, by act of Congress, the four sections embracing especially Hot Springs Mountain, on which the springs are located, was reserved forever for the use and benefit of the whole people. Again lethargy smothered governmental initiative, and nothing further was done to effect local conditions until 1877, when Congress authorized the sale of lots here, and, it may be said, assumed the management and control of the water, which had heretofore been used at pleasure. A small town had grown up, occupied by squatters.

"At the present time it may be said that the government is in absolute control of and supervises the administration of every bathing house, and affords every protection to the visitor.

"The following is taken from a government circular, and speaks for itself:

" 'The waters are radio-active in a marked degree, and to the presence of this rare element in gaseous form is now generally attributed their salutary effects. The baths create a reaction accompanied by an elevation of body temperature, accelerated heart action with diminished blood pressure in the arteries, and a stimulation of the nutritive changes in the tissue cells, especially those composing the organs of elimination and those concerned in the formation of the blood. The mineral constituent is very low, and when the waters are taken internally, combined with the sweating produced by the baths and packs, elimination by all the emunctories is greatly increased.

" 'The hot waters may reasonably be expected to give relief in the following conditions: In gout or rheumatism after the acute or inflammatory stage; in neuralgia when dependent upon gout, rheumatism, malaria or metallic poisoning; in the early stages of chronic Bright's Disease; in catarrhal conditions of the gall-bladder; in certain forms of disease of the pelvic organs, and in sterility in women; in chronic malaria, alcoholism and drug addictions; in many chronic skin diseases; in some forms of anemia; in syphilis; in gonorrheal rheumatism; in toxaemias and conditions of defective elimination, and in some forms of cardio-vascular disease with increased tension in the blood vessels.

" 'The general tonic and recuperative effects are marked in conditions of debility and neurasthenia, due to the strain and fatigue incident to social and business cares and responsibilities, and in many other conditions the baths and climate are useful adjuvants to medical treatment.' "

In the Journal of the American Medical Association, May 4, 1912, Dr. F. McKelvey Bell has an article on "Bismuth Paste Experiments." His conclusions are as follows:

1. Bismuth paste as a drainage for acute suppurating sinuses is painless and efficacious, but does not assist in rapidity of cure.

2. When a sinus shows sluggishness, if five per cent. iodoform be added to the bismuth paste it is much more stimulating to granulations.

3. As a packing and drainage for localized intra-abdominal and pelvic sinuses bismuth paste is safe, painless, rapidly curative, prevents the formation of

pockets of pus, lowers temperature and to a limited extent prevents post-operative adhesions.

4. It may be used as an aid to diagnosis in fecal fistulas, as well as act as a curative agent.

5. In large cavities requiring four or more ounces of paste it should be watched carefully for symptoms of bismuth or arsenic (impurity) poisoning. Unless there is free exit for paste it is dangerous.

6. Bismuth "stones" may form in a closed sinus.

7. In clean wounds or those discharging seropus, it retards healing and tends to chronic conditions. To get results the discharge should be frankly purulent.

From the Lay Press.

Dr. Wm. Mood Dead.

News and Courier.

Harvin, April 21.—Special: Dr. William R. Mood, of Summerton, Clarendon county, died suddenly this afternoon at 3 o'clock, at his home in Summerton. Death was due to heart failure. He is survived by his wife, who was Miss Hattie Scarborough, and nine children.

Dr. Mood was a most affable, genial gentleman, an interesting conversationalist, and a very successful practitioner of his chosen profession. Summerton and that section of Clarendon has lost one of her best citizens.

Raise Monument to Marion Sims.

The State, April 19, 1912.

A movement for the erection of a suitable monument to the great surgeon, J. Marion Sims, is under way. The Sims Memorial Committee of the South Carolina Medical Association made its report yesterday. Dr. Robert Wilson, Jr., of Charleston, was chairman and first spokesman. Dr. S. C. Baker, of Sumter, secretary-treasurer of the committee, followed Dr. Wilson, and after these had spoken, their report was adopted unanimously.

Dr. Wilson said that it has been decided advisable to create a subcommittee in each county, whose duties would be to collect the subscriptions and advance the project in every way. Activity and interest must be stimulated. And the women's clubs in particular should be invited to take a hand in the matter. For it was among the women that the noble physician did his greatest work.

A bill has been passed by the South Carolina Legislature appropriating $5,000, with the provision that $5,000 more be raised by the profession and laymen to meet this. Dr. Strait, senator from Lancaster, introduced the measure, and pushed it. This provision gives to the Governor the power to appoint part of the committee for securing the monument. Dr. Wilson thought it wise, or rather the committee he represented, thought it wise, to correspond with the Attorney General and find out the status of the bill.

F. Wellington Ruckstuhl, sculptor of the monument to the Women of the Confederacy, has said that the proposed memorial monument would cost $10,000. No sculptor, said Secretary Baker, however, has yet been selected.

It is expected that $250 will be raised in each county of the State. There are 44 counties in all. The Columbia Medical Society has alone pledged $500 toward the amount desired.

Fight for Health to Start at Once.

The State, April 20, 1912.

The South Carolina Medical Association will start at once the greatest campaign in behalf of public health that has ever been attempted in the State or in the South. The committee in charge is composed of Dr. William Weston, of Columbia, chairman; Dr. S. C. Baker, of Sum-

ter, and Dr. Edgar A. Hines, of Seneca. The first important move will be made at Charleston, where addresses will be delivered before the State Teachers' Association, and members are expected to join the ranks.

The campaigners have abundant ammunition, and are going to fire destructive volleys into the camps of disease and insanitation. Strong speeches are to be made before all bodies interested in the welfare of South Carolina. The school associations and authorities, church conventions and ministers, the press and benevolent bodies will be singled out and the importance of the project impressed upon them.

Dr. William Weston said yesterday: "No State is prosperous unless that prosperity consists in the health of the people." Dr. E. A. Alderman, president of the University of Virginia, in his address to the medical men, said: "All these things which are being done for the public health, and in particular for the children, simply mean the preservation of the State." Dr. Alderman's address, and that of Dr. J. W. Jervey, of Greenville, before the South Carolina Medical Association, will fill the pages of two of many pamphlets that will be scattered over the country covered by the campaign.

Government Expert Studying Pellagra.

Greenville News, May 1, 1912.

Dr. Randolph M. Grimm, United States Public Health and Marine Hospital Service, with headquarters in Savannah, arrived in Greenville yesterday morning for the purpose of making a study of the disease commonly known as pellagra. Dr. Grimm will spend several weeks here making a close study of such cases as may be found here.

He met last night with the Board of Health, at the special meeting of that body, held for the purpose of conferring with State Health Officer J. Adams Hayne, relative to the feasibility of draining the meadow, and spoke very interestingly of this apparently new disease.

It is understood that the purpose of Dr. Grimm's investigations is to ascertain whether or not pellagra is on the increase or the decrease, as to whether it predominates in the white race or the black race, and in males or females. It is stated that from two-thirds to three-fourths of the pellagra cases recorded so far have been among the white people, and that the disease predominates with the female sex.

Since there are several prominent physicians on the Board of Health who are interested with Dr. Smith in the study and handling of this disease, the talk by Dr. Grimm was especially interesting and helpful.

Dr. Grimm's selection of Greenville as a point from which to make observations does not mean that the disease is any more prevalent here than in any other section of the country. He has heard so much of Greenville and her delightful advantages that he decided that this would be the best place from which to conduct his study.

Hookworm in Dillon County.

News and Courier.

Dillon, May 3.—Special: Dr. F. D. Rogers, hookworm specialist, appointed by the State Board of Health, has completed his work in this county and goes this week to another field. The doctor has been untiring in his labors, and if anyone has not derived benefit from his work it is not his fault.

The efficacy of advertising has been signally manifest in this matter. Hundreds of people have attended Dr. Rogers' clinics and have taken treatment, who never otherwise would have thought of consulting a physician for hookworm.

The report below furnishes a tabulated

statement of work accomplished by Dr. Rogers up to last Saturday, the 27th ult.:

Eight weeks' work done by Dr. F. D. Rogers, in Dillon county, for the South Carolina State Board of Health:

Total number of examinations done	1,579
Total number micro positive	395
Total number micro negative	328
Total number clin positive	348
Total number of clin negative	508
Doses of thymol given, first treatment	743
Doses of thymol given, second treatment	362
Doses of thymol given, third treatment	230
Doses of thymol given, fourth treatment	53
	1,388

Homes inspected, 293; treatment, 156; doctors interviewed, 12; editors interviewed, 2; articles printed, 10; schools inspected, all that were running.

Work done Saturday, April 27, not included in this report.

Newberry Will Build Hospital.

The Daily Record.

Newberry, April 17.—Special: Newberry means to have a hospital, and has gone to work to build it. The Chamber of Commerce adopted the report of its committee, recommending the appointment of a committee of five to act with a committee of five from the county physicians, and to map out plans preparatory to opening books of subscription for putting up a fifteen thousand dollar hospital. It is understood the physicians already have four thousand dollars in sight. The matter has been agitated here for some time, and the movement has now taken definite shape, and with the encouragement and support which it is receiving, promises success.

Arrangements are being made for a banquet to be given by the Chamber of Commerce in the very near future, and it is planned to make it an event in the commercial life of the city.

New Surgeon at Navy Yard.

News and Courier, April 12, 1912.

To begin his duties at the Charleston Naval Station, Dr. A. H. Dodge arrived in Charleston by the Clyde Line steamer, Mohawk, yesterday morning, and is a guest for the present at the St. John Hotel. He is accompanied by Mrs. Dodge. Mr. Dodge has been assigned to duty as a surgeon at the Naval Station, and comes to Charleston from Newport, R. I. Until permanent quarters are arranged at the Navy Yard, Dr. and Mrs. Dodge are making their home at the St. John.

Book Reviews.

Surgical Clinics of John B. Murphy, M. D., Volume I, No. 2.—The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume I, No. 2. Octavo of 291 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published bi-monthly. Price per year: Paper, $8.00; cloth, $12.00.

This number of Dr. Murphy's Clinics is an improvement on the first number issued in February of this year. The contents cover a wide range of subjects. We wish to call particular attention to the cases of bone and joint disease. There are few conditions more trying to the surgeon than ununited fractures. Charcot Ankle Joint is interesting. The X-ray pictures are excellent.

* * *

Differential Diagnosis.—Presented through an analysis of 385 cases. By Richard C. Cabot, M. D., Assistant Professor of Clinical Medicine, Harvard Medical School. Second Edition Revised. Octavo of 764 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, $5.50 net.

Dr. Cabot is one of the most gifted and interesting writers in this country today.

The first edition was received by the profession as a valuable contribution on the subject. Whatever may be said in favor of a constant repeti-

tion of the principles involved in the diagnosis of disease, the presentation and study of the actual cases continues to be highly instructive from every standpoint.

* * *

The Immediate Care of the Injured.—By Albert S. Morrow, M. D., Adjunct Professor of Surgery in the New York Polyclinic. Second Edition Revised. Octavo of 354 pages, with 242 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, $2.50 net.

Almost every one will feel the need of such information as this book affords at times. It would not be out of place as a textbook in the high school or college. A copy in every home would also not be amiss.

The chapter on Poisons is very good indeed. The work generally is commendable, especially the illustrations.

* * *

Diseases of the Genito-Urinary Organs and the Kidney.—By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. D., Assistant Professor of Clinical Medicine, University and Bellevue Medical College. Third Revised Edition. Octavo of 369 pages; 339 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, $5.00 net; half Morocco, $6.50 net.

This book will prove of very practical value to the general practitioner especially. It is the conjoint work of a surgeon and physician, and, therefore, should be a well-balanced guide.

There is a good article on Blood Pressure in Kidney Diseases, now so prominent in the literature and in life insurance circles. A short but clever section on Bright's Disease. The section on Urethritis is well written and of practical value. The surgery generally is good. The illustrations are clear and attractive.

* * *

Cyclopedia of American Medical Biography. By Howard A. Kelly, M. D., Professor of Gynecologic Surgery at Johns Hopkins University, Baltimore. Two octavo volumes, averaging 525 pages each, with portraits. Philadelphia and London: W. B. Saunders Company, 1912. Per set: Cloth, $10.00 net; half Morocco, $13.00 net.

These volumes constitute probably the most comprehensive attempt to summarize the lives and works of American men and women who have contributed to American Medicine ever undertaken. The subject matter covers not only this country, but Canada. The epitome of the history of Medicine and Surgery and the Specialties will be invaluable for all time. The authors of most of the articles are themselves men of national reputation. These books have been five years in preparation. The author for South Carolina is Dr. Robert Wilson, Jr. Several other physicians have also contributed biographical sketches of South Carolina's eminent men. It is indeed interesting to note the great share the South has in the glorious history of American Medicine.

This work will be invaluable for every student of medicine as a foundation stone, for every practicing physician, and for every investigator of the history of our country.

Publishers' Items.

M. E. Brockman, Seneca, S. C., Manager Advertising Department.

A New and Promising Agent for the Treatment of Rheumatism.

An announcement that is certain to cause widespread interest among the profession is being made in a large number of American medical journals in behalf of Rheumatism Phylacogen. The new product is a bacterial derivative originated by Dr. A. F. Schafer, of California. The term "Phylacogen" (derived from two Greek words—the equivalent of "a guard" and "to produce") means "phylaxin producer," phylaxin being

Colden's Liquid Beef Tonic

has always been found especially valuable in that restoration of the appetite so often regarded as the first necessity in the correction of disorders of digestion due to decreased secretory activity. As it

Arouses the Appetite

stimulates the gastric glands, promotes secretory action and induces peristalsis, Colden's Liquid Beef Tonic is indicated in cases of lost appetite, impaired digestion, gastro-intestinal atony, as well as during convalescence and to lessen the feebleness of old age.

When Anemia is a complication Colden's Liquid Beef Tonic with iron is indicated.

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A sample will be sent to physicians on request.

a name that is applied to a defensive proteid found in animals that have acquired an artificial immunity to a given infectious disease.

Rheumatism Phylacogen (Schafer) is a sterile aqueous solution prepared from a large variety of pathogenic bacteria, such as the several staphylococci, streptococcus pyogenes, bacillus pyocyaneus, diplococcus pneumoniæ, bacillus typhosus, bacillus coli communis, streptococcus rheumaticus, streptococcus erysipelatis, etc. The basic Phylacogen is a "polyvalent" preparation, since the organisms are obtained from cultures made at frequent intervals and from a variety of sources. To this basic material is added an equal amount of the filtrate obtained by similarly growing and treating the streptococcus rheumaticus of Poynton and Paine. The product is indicated in all cases of rheumatism, acute and chronic, not due to gonorrheal infection. It is marketed in sealed glass vials of 10 cc. capacity and may be administered subcutaneously or intravenously, the former method being preferred except in cases in which quick results are demanded.

Rheumatism Phylacogen, which is the first of a series of phylacogens originated by Dr. Schafer, and about to be offered to the medical profession, has been thoroughly tested clinically in many of the leading hospitals, as well as by competent specialists and other scientific men in various parts of the country, and is said to have shown brilliant results in a large percentage of cases. With the co-operation of Dr. Schafer, and in accordance with his methods, it is prepared by Parke, Davis & Co., in whom are vested the sole rights of manufacture and sale. Physicians who are interested in this new treatment for rheumatism, and every general practitioner ought to be, will do well to get descriptive literature on the subject. It may be obtained by addressing the manufacturers at their principal laboratories in Detroit, Michigan. Ask for the "Rheumatism Phylacogen Pamphlet," and mention this journal.

* * *

The Therapeutics of Rachitis.

Among remedial agents promising benefit in rachitas, codliver oil, as exhibited in Cord, Ext. Ol. Merrhuæ Comp. (Hagee) is worthy of prominent mention. It not only has abundant value as a tissue nutrient, but its contained phosphorus makes it particularly potent in this condition. There is an urgent indication for this latter agent, which is admirably met by the administration of Cordial of the Extract of Cod Liver Oil Compound (Hagee).

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Treatment is individualized to suit requirements of each patient. Drug habit treated by gradual withdrawal. Minimum discomfort.

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